

NOTE ON *I. POLIOS*.

In the lower part of the plate are represented paratypes No. 23 (σ under surface), No. 24 (σ upper surface), No. 25 (φ under surface), and No. 26 (φ upper surface), of *I. polios*, described in the CANADIAN ENTOMOLOGIST for June, p. 202. It may be pertinent to state that the food-plant of *polios* has been discovered, eggs secured, and the larvæ now being raised have already passed the first moult. The specific validity of the form is no longer open to question.

NEW COLEOPTERA FROM THE SOUTHWEST.—III.

BY H. C. FALL, PASADENA, CALIF.

Pteroloma caraboides, n. sp.—Blackish-brown, moderately shining, legs and antennæ somewhat paler. Antennæ as usual. Head sparsely finely punctate. Prothorax $2/5$ (σ) to $1/2$ (φ) wider than long, widest at or slightly in advance of the middle, base a little wider than the apex, sides moderately rounded, oblique and just perceptibly sinuate posteriorly, hind angles sharply defined, but slightly obtuse; disk evenly, rather feebly, convex, median line not at all impressed, side margin acute and slightly reflexed, a feeble impression within the hind angles; surface finely, sparsely punctate, the punctures somewhat unequal in size, and becoming more numerous near the basal and lateral margins. Elytra elongate oval, a little wider at base than the prothorax, more than three times as long as the latter, and more than one-half longer than wide; sides arcuate, feebly sinuate before the apex, which is narrowly rounded; striæ strongly impressed, distinctly but not coarsely punctate; intervals very finely and sparsely punctulate, the alternate ones with a series of distinct and feeble larger punctures. Body beneath distinctly alutaceous, but shining and very finely, sparsely punctate. Epipleura minutely and sparsely punctate. Length, $6\frac{1}{2}$ –7 mm.

Wenatchee, Washington, collected by Prof. H. F. Wickham; Mt. San Antonio, So. California, a single example taken at an altitude of about 9,000 ft. by Mr. C. A. Richmond.

The male has the front tarsi quite strongly dilated, the first two joints of middle tarsi moderately so.

This species has the general form of *Forstræmei*, but differs—judging from the description—in the more finely punctate thorax, with median line unimpressed, the much less distinct serial punctures of the alternate elytral

intervals, the nearly impunctate epipleura, and the more widely dilated male tarsi. According to Horn's description the sixth ventral segment is deeply longitudinally impressed in the female of *Forstræmei*. There is no sign of such impression in the female of the present species, though in the male of both this and *tenuicornis* the sixth ventral has a fine median impressed line. The resemblance of this species to *Bembidium spectabile* is quite striking.

Chrysobothris carmelita, n. sp.—Moderately elongate, feebly convex, piceous-bronzed; front (σ) green; occiput, front margin of pronotum narrowly, the front angles broadly, brilliant æneo-cupreous; elytral impressions more or less cupreous; beneath blackish, with faint green-bronze lustre, hind thighs æneo-cupreous in apical half. Front nearly flat, rather densely pubescent, uniformly densely punctate, occipital impressed line a little elevated anteriorly; clypeus with deep oval emargination, arcuato-truncate each side. Antennæ bronzed, greenish at base, narrowed externally, third joint barely as long as the two following. Prothorax one-half wider than long, widest close to front angles, sides thence convergent and straight except for a feeble median sinuation, nearly to base, becoming slightly inflexed at the hind angles; disk faintly impressed along the median line, and with a slight impression each side of the middle posteriorly; punctuation dense, with a tendency to form transverse strigæ laterally, especially near the angles. Elytra $\frac{1}{4}$ wider than the prothorax, and about $3\frac{1}{2}$ times as long, very nearly twice as long as wide, basal and intra-humeral impressions well marked, a shallow rounded fovea just before the middle, and two others at apical third; inner costa distinct in apical half; second costa shorter, extending backward from the antemedian fovea; surface densely punctate throughout; side margin serrulate posteriorly, tips conjointly rounded with slight sectional sinuation. Prosternum lobed in front, densely punctate, and with rather long and dense white pubescence. Metasternum and ventral segments densely punctate at sides, less densely so at middle; pubescence abundant, and in well-preserved examples made more conspicuous by the presence of a white efflorescence. Length, $7\frac{1}{4}$ – $8\frac{1}{4}$ mm.

Arizona. Two examples are before me, one without definite locality, the other from Hot Springs, collected by Barber and Schwarz. Both examples are males, having the anterior tibiæ arcuate, and with a rather strong apical dilatation, above which the inner margin is distinctly notched

or impressed; middle tibiæ sinuate within and mucronate at tips, hind tibiæ straight; apical ventral segment broadly arcuately emarginate. One of the above examples has been in my collection many years, and was once submitted to Dr. Horn, who referred it doubtfully to *debilis*. It is, however, abundantly distinct from the latter by the dense punctuation of the entire upper surface, deeper clypeal emargination, brilliant colour of head and anterior margin of pronotum, form of prothorax, and other details. The front tibiæ of the ♂ in *debilis* are not emarginate above the dilatation.

Chrysobothris micromorpha, n. sp.—Elongate, not depressed, dark brown bronzed with traces of violaceous lustre on the anterior part of the pronotum and on parts of the elytra; front green (♂), vertex and occiput bright coppery-red; beneath piceous, faintly bronzed, tips of middle thighs and apical half or more of hind thighs brilliant coppery-red. Antennæ piceous, becoming bronzed at base, third joint much shorter than the next two united; outer joints gradually narrower. Front moderately convex, with conspicuous though not very dense white pubescence; punctuation moderately close and a little irregular, having a small smoother area each side of the median line, above which is a well-defined vertical chevron; clypeus broadly arcuately emarginate, sides subtruncate. Prothorax slightly less than twice as wide as long, sides subangulate at $\frac{2}{5}$ from base, before which they are nearly straight and parallel, posteriorly straight and strongly convergent to base, which is narrower than the apex, and about $\frac{3}{5}$ as wide as the base of the elytra; surface uniformly convex, without distinct impressions; punctures uniformly distributed, distant by rather more than their own diameter, and without tendency toward strigosity except very feebly near the hind angles. Elytra $\frac{2}{3}$ wider than the prothorax, sides parallel and straight to about apical third, apex serrulate, surface without distinct foveæ except the basal ones; the inner costa feeble but evident toward the apex; punctuation similar to that of the pronotum. Prosternum rather strongly lobed in front, closely punctate anteriorly, a little less so posteriorly. Abdomen moderately punctate and pubescent, without lateral callosities. Length, $4\frac{1}{2}$ mm.

Arizona. As in the preceding species, two examples are at hand, one without definite locality, the other taken at Hot Springs by Barber and Schwarz.

Both specimens are ♂'s, and have the front tibiæ slightly arcuate and dilated within at apex, middle tibiæ less arcuate, hind tibiæ straight; last

ventral truncate and broadly feebly emarginate, the outer angles of the emargination not dentiform. The side margins of the last ventral segment are evidently though feebly serrulate, and this, together with the absence of pronotal foveæ or callosities, places this species in Horn's Group I. It is most nearly allied to *piuta*, Wick., which should evidently be referred to the same group instead of Group IV, as stated by its author, but is still smaller—in fact, the smallest species of the genus known to me—and lacks the elytral foveæ, which are well defined in *piuta*. In this latter the coloration of the upper surface is more brilliant, the sides of the prothorax less narrowed posteriorly, and scarcely at all angulate, the third antennal joint longer and relatively narrower.

Chrysobothris pubescens, n. sp.—Moderately robust, dark bronze, shining, distinctly but sparsely pubescent throughout. Head coppery (♀), front green (♂). Antennæ narrowed externally, bronzed in ♀, greenish in ♂, third joint much shorter than the next two together. Front closely punctate, without or with but a small feeble callosity each side of the median line; clypeus with broad triangular emargination, lateral lobes rounded. Prothorax one-half wider than long, sides rounded in front and behind, parallel and slightly sinuate at middle; disk nearly uniformly convex except for a shallow impression on the median line anteriorly, callosities wanting, punctuation moderately close. Elytra one-third wider than the prothorax, not quite twice as long as wide, basal foveæ broad, not very deep; discal foveæ three in number, one before the middle, the other two at apical third, the outer one a little in advance of the inner, and sometimes connected with it, all the foveæ more or less cupreous or rarely greenish; costæ somewhat variable, the inner one usually distinct from basal third to apex; the second feebler, scarcely elevated, interrupted by the foveæ; punctures rather fine and well separated, at least at the middle of the disk; apices rounded and feebly serrulate. Prosternum lobed in front, closely and rather coarsely punctate, pubescent, scarcely differing in the sexes; ventral segments brightly bronzed, rather sparsely punctured at middle, more closely so laterally, and with more or less evident callosities. Front thighs with moderate acute tooth, which is denticulate externally. Length, $7\frac{1}{2}$ –9 mm.

California. Not rare in the Southern Sierras at altitudes of 3,000 to 6,000 ft., occurring most commonly on scrub oak.

In the male the tibial characters are the same as in the allied *deleta*, and the last ventral is very similarly subsemicircularly emarginate. In the

female of *pubescens* the last ventral has a much smaller emargination of nearly same shape as in the male, while in *deleta* (♀) the emargination is bisinuate. *Pubescens* is evidently broader and a little less convex than *deleta*, and—so far as my experience goes—may always be distinguished from the allied *deleta*, *deserta* and *lixa* by the anterior discal impression of the pronotum, which though slight is very constant, but is entirely lacking in the others. *Deleta* has a transverse series of four small callosities on the pronotum, the outer two often ill-defined. In *pubescens* these callosities are lacking, while in *deserta* they are larger and all four distinct. *Deserta* and *deleta* are very closely related; in fact, one of the two examples of the former in the Horn collection is really *deleta*. This specimen is from the vicinity of San Diego, in which region *deleta* seems to occur more frequently than elsewhere, while the type of *deserta*—the specimen bearing the label—is from the Mojave Desert. In this latter the eyes are separated on the vertex by a distance subequal to half the length of the pronotum on the median line, and the third antennal joint is fully twice as long as wide, while in *deleta* the eyes are separated by a distance equal to two-thirds the length of the pronotum, and the third antennal joint is less slender, never quite twice as long as wide. There is virtually no difference in the form of the anterior tibiae of the male in these two species, notwithstanding Horn's remark, nor do I believe the elytral costæ can be depended on as a mark of distinction.

There is a manifest inconsistency in the Horn tabulation of groups in this genus, in which it is stated that the species of Groups II–V have the “disk of the thorax irregular, median line more or less sulcate.” This character completely fails in Group V, which includes the species we are now considering. A better character for the separation of this group would be the pubescence of the entire upper surface, which is always very obvious in even fairly well preserved specimens, and which does not exist elsewhere in our species.

Chrysobothris smaragdula, n. sp.—Moderately elongate, bright green above, dark green, with slight violaceous tint, below, surface moderately shining, glabrous. Antennæ with first three joints green, outer joints piceous, feebly metallic, gradually decreasing in width, third joint nearly as long as the next three. Front feebly convex, strongly, closely punctate; clypeus broadly triangularly emarginate, arcuate each side. Prothorax nearly twice as wide as long, sides straight and parallel

almost throughout, disk feebly, evenly convex, punctuation moderately coarse and close, with slight tendency to transverse strigosity. Elytra a little wider than the prothorax, sides parallel for three-fifths their length, then arcuately narrowed to apex, the tips separately rounded and serrulate; surface somewhat uneven, but without costæ or foveæ except the basal impressions; punctuation similar to that of the prothorax. Prosternum coarsely, densely punctate, the flanks more sparsely so; abdomen sparsely punctate and polished; ventral segments without callosities, the last segment with submarginal serrate ridge, the lateral margin interrupted but not serrulate. Prosternum lobed in front, anterior femora toothed as usual. Length, 6 mm.

Oak Creek Canon, Arizona (Prof. Snow).

Described from a single female (?) specimen.

This species must be referred to Horn's Group VIII, and is most nearly related to *prasina*; this latter, however, has the prothorax narrowed anteriorly, the punctuation sparser, the last ventral without submarginal ridge.

Acmaødera robusta, var. *rubrosuffusa*, n. var.—In a series of specimens taken by Dr. Fenyès at Mojave, Cal., the basal portion of the disk of the elytra is broadly suffused with red. The prothorax is also brightly bronzed, and the abdomen violaceous-bronzed, instead of black as in the typical form. In this latter respect it approaches *tuta*, of which, indeed, it might be considered a variety with about equal propriety.

Acmaødera Hepburnii, var. *latiflava*, n. var.—This name is proposed for a form of *Hepburnii* in which the elytra are entirely yellow except the tip of the humeral umbone, a narrow sutural stripe, and one or two small spots at apical third. It looks so different from the typical form that it would naturally be separated in a cabinet arrangement, and has, indeed, been mistaken by collectors for a distinct species. It is known to me from the Yosemite region and from various points in So. California.

Acmaødera Bishopiana, n. sp.—Moderately stout, black, shining, not at all bronzed, prothorax with or without a very small yellow spot at sides near the base, elytra with numerous small irregular yellow spots, pubescence long, fine, erect, fuscous and cinereous, the latter colour predominating. Head densely punctate as usual, vertex finely carinate, clypeal emargination rather deep, nearly as in *labyrinthica*. Prothorax not wider than the elytra, twice as wide as long, widest a little before the

base, surface coarsely, deeply punctate, the punctures well separated toward the middle, the interstices polished. Elytra with coarsely punctate striæ; intervals narrow, nearly flat on the disk. Beneath rather strongly, closely punctate; apical ventral plate small and feeble, the free edge thin and evenly arcuato-truncate. Length, 6.5-8 mm.

Bishop, Big Pine and Independence, Inyo Co., California. Collected by Dr. Fenyes, June 7-12.

This species belongs to the "Emarginatæ," and is most nearly related to *labyrinthica*, which is, however, on the average a larger species, always distinctly bronzed, the form slightly flatter, the prothorax more closely and relatively a little more finely punctate, the elytra with more numerous and intricate markings. *Bishopiana* resembles quite closely a form which I hold to be a variety of *dolorosa*, taken by Dr. Fenyes in the same region; this latter is somewhat flatter, more pointed behind, and with distinctly more broadly, less deeply emarginate clypeus.

Acmaeodera faceta, n. sp.—Parallel, subcylindrical, dorsum a little depressed. Head and thorax black, elytra dark blue, with a small orange-red marginal spot near the posterior fourth; beneath blue-black. Head not densely punctate, front moderately impressed at middle. Prothorax slightly narrower than the elytra, gradually narrowed in front, sides subparallel in basal third or half, punctuation sparse at middle, closer at sides, surface polished, basal impressions feeble. Elytra parallel for two-thirds their length or more, post-humeral sinuation feeble; striæ moderate, intervals rather narrow, nearly flat on the disk, more convex laterally. Pubescence fine, sparse, whitish throughout. Front margin of prosternum with two distant obtuse but rather prominent lobe-like teeth. Ventral segments rather finely and densely punctate at sides, more sparsely at middle; last ventral with feeble apical crest. Length, $5\frac{3}{4}$ -7 mm.

Santa Rosa, Lower California (Beyer).

This species resembles *stigmata* and *bivulnera* quite closely. The prosternal characters are nearly as in *stigmata*, which species is, however, a little more gradually narrowed behind, lateral red spot more anterior in position, the prothorax green-bronzed rather than black, the abdomen more evenly punctate. In *bivulnera* the front of the prosternum is quite different in outline, having a rather strong sinuate lobe at middle.

Acmaeodera larreae, n. sp.—Strongly convex, subcylindrical, head, prothorax and under surface distinctly æneous, elytra yellow, with four or

five irregular pale brown fasciæ; pubescence sparse, fine, short, suberect and entirely whitish in colour. Antennæ very strongly serrate (♂) or moderately so (♀), the serration beginning with the fourth joint, which is as wide as the fifth; joints 4-10 all much broader and long. Head densely punctate, very feebly impressed. Prothorax one-half wider than long, sides not very strongly rounded, apex four-fifths as wide as the base, surface densely, almost cribrately punctate, median impression feeble, lateral basal foveæ moderately deep. Elytra barely as wide as the prothorax, sides feebly sinuate basally, gradually narrowed behind, striæ impressed, closely, moderately punctate, intervals narrow and more or less convex. Beneath with sparse white recumbent pubescence, prosternum truncate in front; abdomen rather sparsely, not coarsely, punctate, and polished; last ventral without apical plate. Length, $7\frac{1}{2}$ -9 mm.

The type is one of three examples taken by Dr. Fenyès at Mojave, Cal., on *Larrea*. In one specimen the brown bands are darker and wider, and the elytra might more properly be described as brown, with irregular yellow fasciæ. In this species the sexual differences in the antennæ are remarkable. Joints 4-10 are not only very broad in the male, but they are very densely minutely punctulate and clothed with an exceedingly short, erect blackish pile. In the female the surface of the joints is moderately punctulate and shining, and clothed as usual. By the broad fourth joint of the antennæ this species is related to *cribricollis*, *gemina* and *insignis*. By some mischance, *cribricollis* is, in my Synopsis of this genus, erroneously tabulated with those species having the fifth antennal joint abruptly wider than the fourth. The species is really very close to the one here described, but differs in having the elytral markings black instead of brown (perhaps not constant), the punctuation of the ventral segments coarser, especially apically, the last ventral with evident thick marginal crest. Males of *cribricollis* are as yet unknown, so it is not possible to say if a similar sexual disparity in the form of the antennæ exists.

Trirhabda labrata, n. sp.—Form and size of *flavolimbata*. Elytra brilliant green, with narrow pale margin, pubescence unusually sparse and short, the surface quite strongly shining, punctuation dense and rather coarse. Prothorax about twice as wide as long, more or less strongly transversely impressed, and with the usual three spots, these being large, sometimes confluent, metallic-green; surface highly polished and sparsely

punctured, the pubescence nearly wanting. Head testaceous in front, labrum blackish; occiput entirely green, sparsely, finely punctured and shining. Antennæ in great part piceous; under side of body and legs testaceous, varied with dark green or piceous. In the male the last ventral is rather strongly and broadly emarginate at apex; in the female there is a small subcircular emargination, the sides of which nearly meet behind. The inner division of the claws is as usual a little shorter and more divergent in the female. Length, $6\frac{1}{4}$ - $7\frac{1}{2}$ mm.

Monterey, California (Fenyès).

The brilliant green colour, sparse pubescence, shining surface and dark labrum are the distinguishing characteristics of this species. The punctuation of the elytra is also evidently coarser than in *flavolimbata*, and much coarser than in *luteocincta*, in both of which species the labrum is pale, or at most slightly dusky, the head more densely punctate and dull, the occipital plaga less extended, not as a rule involving the upper inner margin of the eye.

Trirhabda eriodictyonis, n. sp.—Oblong, rather robust, not broader behind, testaceous throughout, antennæ dusky except at base, head with a very small occipital plaga, which becomes linear in the female, and is rarely entirely wanting. Prothorax with the three spots small, black; elytra with greenish elongate humeral spot, which may extend the entire length of the elytra, or may become almost obsolete. Head densely, rather coarsely punctate, feebly shining; prothorax sparsely, feebly punctate or nearly smooth, polished; elytra densely, finely punctate.

Male with broad but distinct apical ventral emargination; female with much narrower but relatively deeper emargination. Length, $7\frac{1}{2}$ -9 mm.

This species occurs rather abundantly on a species of *Eriodictyon* ("Yerba Santa") at Pasadena, San Bernardino and elsewhere in Southern California.

It has been distributed quite generally as *caduca*, on the basis of an erroneous identification made years ago for the writer. The latter species is much smaller, very sparsely pubescent, more shining, less densely punctate, the dark markings without metallic lustre, the occipital spot much larger. It is known only from Owens Valley. *Nigrohumeralis*, Schf., is still closer to the present species, but in it the punctuation is somewhat coarser, and, like *caduca*, it is smaller and the dark markings are not at all metallic.